

Claim 1 recites in part:

5        said iron nitride thin film being produced on  
the substrate in a manner to as to permit  
diffraction rays from a  $\gamma$  phase to be  
observed, said  $\alpha'$  phase having diffraction  
rays observed from only said  $\alpha$  (002)  
surface.

Applicant submits that such an invention is neither taught,  
10        disclosed nor suggested by Takahashi et al or any of the other  
cited references, alone or in combination.

Takahashi et al, at page 3043, discloses the appearance of a  
 $\gamma'$  phase. Takahashi et al discloses a phase change of  $\text{Fe}_{16}\text{N}_2$   
films occurs around  $250^\circ\text{C}$  which causes ( $\alpha'' + \alpha'$ ) to change to ( $\alpha$   
15        +  $\gamma'$ ) (as further illustrated in Fig. 3(b)). As such, Takahashi  
et al does not disclose or suggest the general co-existence of  
the  $\alpha'$  and  $\gamma'$  phases. Based upon that phase change information,  
one of ordinary skill in the art would expect  $\alpha'$  and  $\gamma'$  to  
coexist, under equilibrium conditions, only at  $250^\circ\text{C}$  within the  
20        thin films disclosed by Takahashi et al. Thus, Takahashi et al  
fails to teach or suggest the present invention, as set forth by  
claim 1.

For all the foregoing reasons, Applicants submit that claim  
1, and claims 10 and 12 depending therefrom, are now in condition  
25        for allowance and hereby respectfully request that the rejection  
thereof based on Takahashi et al be withdrawn.

The Examiner has indicated that claims 2, 11, and 13 are  
allowed, for which courtesy the Examiner is thanked.

If the Examiner has any questions or comments that would speed prosecution of this case, the Examiner is invited to call the undersigned at 260/485-6001.

Respectfully submitted,



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JTK/mdc

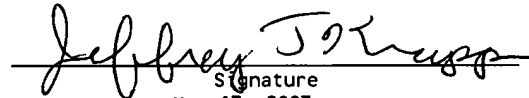
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Hon. Commissioner of Patents and Trademarks, Alexandria, VA 22313-1450, on: May 13, 2003.

Jeffrey T. Knapp, Regis. No. 45,384  
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Signature  
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Date